

REMARKS

The Examiner, in the Office Action, indicates that Claims 1-8, 17-20 and 23-27 are rejected under 35 U.S.C. 103(a) as being obvious over applicant's admitted prior art (hereinafter simply referred to as "prior art") in view of Morita et al (U.S. Patent No. 6,985,178), and further indicates as follows.

The prior art further discloses an upper limiting value calculated in response to the slanted angle of the opening and a direction of the imaging unit (Spec Figs. 12-14 and p. 2 line 4 to p. 4 line 12 note Fig. 14 0p changes with the current tilt value, also spec p. 3 lines 21-31 upper limiting pan and tilt values depend on the shape of the opening). It is noted that the prior art does not disclose details of calculating a changed upper limiting pan value in response to camera position. However, Morita discloses a camera control system in which upper limiting pan values can be changed to based on camera position (Morita Figs. 14, 18, 19 and generally col. 10 line 29 to col. 14 line 15, specifically Fig. 18 and col. 10 lines 29 to 59 note irregular viewable area shape, Fig. 14 S502 and col. 12 line 65 to col. 13 line 17 note reading out control range and Fig. 19 note pan and tilt limits associated with various camera positions) and controlling a pan motor to allow imaging within changed upper limiting values (Morita Fig. 14 S511, S512 and col. 13 lines 18 to 28). It is therefore considered obvious that one of ordinary skill in the art would recognize the advantage of utilizing changeable upper limiting pan values and associated control as taught by Morita in accordance with the upper limiting pan values shown by the prior art in order to control panning where the total viewing area is non-rectangular as suggested by Morita (Morita col. 10 lines 40-51).

Unfortunately, the Examiner has a mistaken perception. The prior art has fixed values indicative of upper limiting pan and tilt angles, and allows the imaging unit to be moved around the pan and tilt shafts within the range of upper limiting pan and tilt angles. However, the prior art does not have a function necessary for changing the fixed values in response to the slanted angle of the opening and a direction of the imaging unit.

As will be seen from FIGS. 5 and 12, the pan and tilt signal producing means 161 and 171 of the prior art correspond to pan and tilt signal producing means 31 and 41 which form part of the controlling means of the surveillance camera apparatus according to the present invention,

and are respectively constituted by encoders. The pan and tilt signal producing means 161 and 171 are adapted to produce pan and tilt signals in association with the revolution of pan and tilt shafts 140 and 150.

The pan and tilt value calculating means 165 and 175 are adapted to calculate pan and tilt values indicative of current pan and tilt angles " θ_p " and " θ_t " of the imaging unit in response to the pan and tilt signals produced by the pan and tilt signal producing means 161 and 171. The predetermined upper-limiting pan and tilt values " θ_{pmax} " and " θ_{tmax} " (fixed values) are previously stored in the upper-limiting pan and tilt value storing means 164 and 174. However, the predetermined upper-limiting pan and tilt values " θ_{pmax} " and " θ_{tmax} " stored in the upper-limiting pan and tilt value storing means 164 and 174 do not depend on the shape of the opening. The prior art does not have a function necessary for changing the predetermined upper-limiting pan and tilt values " θ_{pmax} " and " θ_{tmax} ".

As will be seen from Fig. 14, the shaded area indicates dead angle, and is defined by a broken line 200. However, the prior art does not have functions necessary for calculating the broken line 200, and detecting whether or not the direction of the imaging unit is in the shaded area, i.e., dead angle, and cannot avoid the dead angle.

As will be seen from Fig. 14, the predetermined upper-limiting pan value " θ_{pmax} " stored in the upper-limiting pan value storing means 164 corresponds to a straight line passing from R1 to R3 and a straight line passing from R2 to R4. On the other hand, the broken line 200 is defined by upper-limiting pan and tilt values " θ_p " and " θ_t " which are different from the predetermined upper-limiting pan value " θ_{pmax} " stored in the upper-limiting pan value storing means 164. In the surveillance camera apparatus according to the present invention, the upper-limiting pan and tilt values " θ_p " and " θ_t " is changed in response to a current pan and tilt values of the imaging unit direction of the imaging unit.

Therefore, it is believed that the Examiner's indication is incorrect, and the advantage of utilizing changeable upper limiting pan value is not recognized even if the prior art and Morita (U.S. Patent No. 6,985,178) are combined by one of ordinary skill in the art.

As will be seen from col. 10 lines 40-51 and FIG. 18 of Morita (U.S. Patent No. 6,985,178), even if the total view area is non-rectangular, an area in which image pick-up is possible is divided into several rectangular areas, and virtual cameras are assigned to respective rectangular areas each having upper-limiting pan and tilt angles (fixed values). Therefore, Morita (U.S. Patent No. 6,985,178) fails to teach that upper-limiting pan and tilt angles are changed in response to the shooting direction of the camera.

The present invention defined in claim 1 is patentably distinguishable over the

applicant's admitted prior art and Morita (U.S. Patent No. 6,985,178).

Claim 2 depends from claim 1 which is believed to be patentably distinguishable over the applicant's admitted prior art and Morita (U.S. Patent No. 6,985,178). It is, therefore, believed that claim 2 is patentably distinguishable over the applicant's admitted prior art and Morita (U.S. Patent No. 6,985,178) based on the same reasons as above.


Claims 4, 6, and 7 depend from claim 1. Claims 3 and 23 depend from claim 2. Claims 9, 10, 11, 17, 18, 19, and 20 depend from claim 3. Claim 5 depends from claim 4. Claim 8 depends from claim 7. Claims 12 and 14 depend from claim 10. Claim 13 depends from claim 9. Claim 21 depends from claim 13. Claim 22 depends from claim 14. Claims 24, 25, 26, and 27 depend from claim 23. It is, therefore, believed that claims 3-8, 17-20, 23-27 are patentably distinguishable over the applicant's admitted prior art and Morita (U.S. Patent No. 6,985,178) based on the same reasons as above.

In view of the foregoing description, it is respectfully submitted that the present application is now in condition for allowance and notification of same is requested.

If any additional fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 35846.

Respectfully submitted,

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